

## **RAW SEQUENCE LISTING**

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Application Serial Number: 10/520,820  
Source: PCT  
Date Processed by STIC: 08/22/2005

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**RAW SEQUENCE LISTING**  
**PATENT APPLICATION:** US/10/520,820

**DATE:** 08/22/2005  
**TIME:** 17:06:40

**Input Set :** A:\PTO.KD.txt  
**Output Set:** N:\CRF4\08222005\J520820.raw

3 <110> APPLICANT: MUTABILIS S.A.  
W--> 4 <120> TITLE OF INVENTION: Pathogenicity determinants which can be used as targets for developing  
W--> 5 means for preventing and controlling bacterial infections and/or systemic  
W--> 6 dissemination  
9 <130> FILE REFERENCE: 1621  
11 <140> CURRENT APPLICATION NUMBER: 10/520,820  
C--> 12 <141> CURRENT FILING DATE: 2005-01-07  
14 <150> PRIOR APPLICATION NUMBER: PCT/EP2003/008209  
15 <151> PRIOR FILING DATE: 2003-07-09  
17 <150> PRIOR APPLICATION NUMBER: FR 0208636  
18 <151> PRIOR FILING DATE: 2002-07-09  
20 <160> NUMBER OF SEQ ID NOS: 32  
22 <170> SOFTWARE: PatentIn version 3.1  
24 <210> SEQ ID NO: 1  
25 <211> LENGTH: 305  
26 <212> TYPE: PRT  
27 <213> ORGANISM: Escherichia coli  
30 <400> SEQUENCE: 1  
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35 Trp Val Val Glu Glu Gly Phe Ala Gln Ile Pro Ser Trp His Ala Ala  
36 20 25 30  
39 Val Glu Arg Val Ile Pro Val Ala Ile Arg Arg Trp Arg Lys Ala Trp  
40 35 40 45  
43 Phe Ser Ala Pro Ile Lys Ala Glu Arg Lys Ala Phe Arg Glu Ala Leu  
44 50 55 60  
47 Gln Ala Glu Asn Tyr Asp Ala Val Ile Asp Ala Gln Gly Leu Val Lys  
48 65 70 75 80  
51 Ser Ala Ala Leu Val Thr Arg Leu Ala His Gly Val Lys His Gly Leu  
52 85 90 95  
55 Asp Trp Gln Thr Ala Arg Glu Pro Leu Ala Ser Leu Phe Tyr Asn Cys  
56 100 105 110  
59 Lys His His Ile Ala Lys Gln Gln His Ala Val Glu Arg Thr Arg Glu  
60 115 120 125  
63 Leu Phe Ala Lys Ser Leu Gly Tyr Ser Lys Pro Gln Thr Gln Gly Asp  
64 130 135 140  
67 Tyr Ala Ile Ala Gln His Phe Leu Thr Asn Leu Pro Thr Asp Ala Gly  
68 145 150 155 160  
71 Glu Tyr Ala Val Phe Leu His Ala Thr Thr Arg Asp Asp Lys His Trp  
72 165 170 175  
75 Pro Glu Glu His Trp Arg Glu Leu Ile Gly Leu Leu Ala Asp Ser Gly  
76 180 185 190  
79 Ile Arg Ile Lys Leu Pro Trp Gly Ala Pro His Glu Glu Arg Ala

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87	Ser Leu Glu Gly Val Ala Arg Val Leu Ala Gly Ala Lys Phe Val Val		
88	225	230	235
91	240		
92	Ser Val Asp Thr Gly Leu Ser His Leu Thr Ala Ala Leu Asp Arg Pro		
95	245	250	255
96	Asn Ile Thr Val Tyr Gly Pro Thr Asp Pro Gly Leu Ile Gly Gly Tyr		
99	260	265	270
100	Gly Lys Asn Gln Met Val Cys Arg Ala Pro Gly Asn Glu Leu Ser Gln		
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124	20	25	30
127	Asp Thr Ile Pro Ile Leu Ser Glu Asn Pro Glu Ile Asn Ala Leu Tyr		
128	35	40	45
131	Gly Ile Lys Asn Lys Lys Ala Lys Ala Ser Glu Lys Ile Ala Asn Phe		
132	50	55	60
135	Phe His Leu Ile Lys Val Leu Arg Ala Asn Lys Tyr Asp Leu Ile Val		
136	65	70	75
			80
139	135 Asn Leu Thr Asp Gln Trp Met Val Ala Ile Leu Val Arg Leu Leu Asn		
140	85	90	95
143	Ala Arg Val Lys Ile Ser Gln Asp Tyr His His Arg Gln Ser Ala Phe		
144	100	105	110
147	Trp Arg Lys Ser Phe Thr His Leu Val Pro Leu Gln Gly Asn Val		
148	115	120	125
151	Val Glu Ser Asn Leu Ser Val Leu Thr Pro Leu Gly Val Asp Ser Leu		
152	130	135	140
155	Val Lys Gln Thr Thr Met Ser Tyr Pro Pro Ala Ser Trp Lys Arg Met		
156	145	150	155
			160
159	Arg Arg Glu Leu Asp His Ala Gly Val Gly Gln Asn Tyr Val Val Ile		
160	165	170	175
163	Gln Pro Thr Ala Arg Gln Ile Phe Lys Cys Trp Asp Asn Ala Lys Phe		
164	180	185	190
167	Ser Ala Val Ile Asp Ala Leu His Ala Arg Gly Tyr Glu Val Val Leu		
168	195	200	205
171	Thr Ser Gly Pro Asp Lys Asp Asp Leu Ala Cys Val Asn Glu Ile Ala		
172	210	215	220
175	Gln Gly Cys Gln Thr Pro Pro Val Thr Ala Leu Ala Gly Lys Val Thr		

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176	225	230	235	240
179	Phe Pro Glu Leu Gly Ala Leu Ile Asp His Ala Gln Leu Phe Ile Gly			
180	245	250	255	
183	Val Asp Ser Ala Pro Ala His Ile Ala Ala Ala Val Asn Thr Pro Leu			
184	260	265	270	
187	Ile Ser Leu Phe Gly Ala Thr Asp His Ile Phe Trp Arg Pro Trp Ser			
188	275	280	285	
191	Asn Asn Met Ile Gln Phe Trp Ala Gly Asp Tyr Arg Glu Met Pro Thr			
192	290	295	300	
195	Arg Asp Gln Arg Asp Arg Asn Glu Met Tyr Leu Ser Val Ile Pro Ala			
196	305	310	315	320
199	Ala Asp Val Ile Ala Ala Val Asp Lys Leu Leu Pro Ser Ser Thr Thr			
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203	Gly Thr Ser Leu			
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218	Pro Phe Glu Glu Val Lys Thr Leu Gln Gly Glu Val Phe Arg Glu Leu			
219	20	25	30	
222	Glu Thr Arg Arg Thr Leu Arg Phe Glu Met Ala Gly Lys Ser Tyr Phe			
223	35	40	45	
226	Leu Lys Trp His Arg Gly Thr Thr Leu Lys Glu Ile Ile Lys Asn Leu			
227	50	55	60	
230	Leu Ser Leu Arg Met Pro Val Leu Gly Ala Asp Arg Glu Trp Asn Ala			
231	65	70	75	80
234	Ile His Arg Leu Arg Asp Val Gly Val Asp Thr Met Tyr Gly Val Ala			
235	85	90	95	
238	Phe Gly Glu Lys Gly Met Asn Pro Leu Thr Arg Thr Ser Phe Ile Ile			
239	100	105	110	
242	Thr Glu Asp Leu Thr Pro Thr Ile Ser Leu Glu Asp Tyr Cys Ala Asp			
243	115	120	125	
246	Trp Ala Thr Asn Pro Pro Asp Val Arg Val Lys Arg Met Leu Ile Lys			
247	130	135	140	
250	Arg Val Ala Thr Met Val Arg Asp Met His Ala Ala Gly Ile Asn His			
251	145	150	155	160
254	Arg Asp Cys Tyr Ile Cys His Phe Leu Leu His Leu Pro Phe Ser Gly			
255	165	170	175	
258	Lys Glu Glu Leu Lys Ile Ser Val Ile Asp Leu His Arg Ala Gln			
259	180	185	190	
262	Leu Arg Thr Arg Val Pro Arg Arg Trp Arg Asp Lys Asp Leu Ile Gly			
263	195	200	205	
266	Leu Tyr Phe Ser Ser Met Asn Ile Gly Leu Thr Gln Arg Asp Ile Trp			
267	210	215	220	
270	Arg Phe Met Lys Val Tyr Phe Ala Ala Pro Leu Lys Asp Ile Leu Lys			

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271 225                    230                    235                    240  
 274 Gln Glu Gln Gly Leu Leu Ser Gln Ala Glu Ala Lys Ala Thr Lys Ile  
 275                    245                    250                    255  
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 283 <211> LENGTH: 374  
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 293 Gln Arg Asp Phe Met Arg Ile Ala Gln Thr Val Ala Ala Arg Gly His  
 294                    20                    25                    30  
 297 His Val Arg Val Tyr Thr Gln Ser Trp Glu Gly Glu Cys Pro Asp Val  
 298                    35                    40                    45  
 301 Phe Glu Leu Ile Lys Val Pro Val Lys Ser His Thr Asn His Gly Arg  
 302                    50                    55                    60  
 305 Asn Ala Glu Tyr Phe Ala Trp Val Gln Lys His Leu Arg Glu His Pro  
 306 65                    70                    75                    80  
 309 Val Asp Lys Val Val Gly Phe Asn Lys Met Pro Gly Leu Asp Val Tyr  
 310                    85                    90                    95  
 313 Tyr Ala Ala Asp Val Cys Tyr Ala Glu Lys Val Ala Gln Glu Lys Gly  
 314                    100                    105                    110  
 317 Phe Phe Tyr Arg Leu Thr Ser Arg Tyr Arg His Tyr Ala Ala Phe Glu  
 318                    115                    120                    125  
 321 Arg Ala Thr Phe Glu Gln Gly Lys Pro Thr Gln Leu Leu Met Leu Thr  
 322                    130                    135                    140  
 325 Asp Lys Gln Ile Ala Asp Phe Gln Lys His Tyr Gln Thr Glu Ala Glu  
 326 145                    150                    155                    160  
 329 Arg Phe His Ile Leu Pro Pro Gly Ile Tyr Pro Asp Arg Lys Tyr Ser  
 330                    165                    170                    175  
 333 Gln Gln Pro Ala Asn Ser Arg Glu Ile Phe Arg Lys Lys Asn Gly Ile  
 334                    180                    185                    190  
 337 Thr Glu Gln Gln Tyr Leu Leu Leu Gln Val Gly Ser Asp Phe Thr Arg  
 338                    195                    200                    205  
 341 Lys Gly Val Asp Arg Ser Ile Glu Ala Leu Ala Ser Leu Pro Asp Ser  
 342                    210                    215                    220  
 345 Leu Arg His Asn Thr Leu Leu Tyr Val Val Gly Gln Asp Lys Pro Arg  
 346 225                    230                    235                    240  
 349 Lys Phe Glu Ala Leu Ala Glu Lys Arg Gly Val Arg Ser Asn Val His  
 350                    245                    250                    255  
 353 Phe Phe Ser Gly Arg Asn Asp Val Ser Glu Leu Met Ala Ala Asp  
 354                    260                    265                    270  
 357 Leu Leu Leu His Pro Ala Tyr Gln Glu Ala Ala Gly Ile Val Leu Leu  
 358                    275                    280                    285  
 361 Glu Ala Ile Thr Ala Gly Leu Pro Val Leu Thr Thr Ala Val Cys Gly  
 362                    290                    295                    300  
 365 Tyr Ala His Tyr Ile Val Asp Ala Asn Cys Gly Glu Ala Ile Ala Glu

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366	305	310	315	320
369	Pro Phe Arg Gln Glu Thr Leu Asn Glu Ile Leu Arg Lys Ala Leu Thr			
370	325	330	335	
373	Gln Ser Ser Leu Arg Gln Ala Trp Ala Glu Asn Ala Arg His Tyr Ala			
374	340	345	350	
377	Asp Thr Gln Asp Leu Tyr Ser Leu Pro Glu Lys Ala Ala Asp Ile Ile			
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396	Ser Gln Ser Leu Tyr Arg Thr Leu Gln Ala Arg Tyr Pro Gln Ala Ile			
397	20	25	30	
400	Ile Asp Val Met Ala Pro Ala Trp Cys Arg Pro Leu Leu Ser Arg Met			
401	35	40	45	
404	Pro Glu Val Asn Glu Ala Ile Pro Met Pro Leu Gly His Gly Ala Leu			
405	50	55	60	
408	Glu Ile Gly Glu Arg Arg Lys Leu Gly His Ser Leu Arg Glu Lys Arg			
409	65	70	75	80
412	Tyr Asp Arg Ala Tyr Val Leu Pro Asn Ser Phe Lys Ser Ala Leu Val			
413	85	90	95	
416	Pro Phe Phe Ala Gly Ile Pro His Arg Thr Gly Trp Arg Gly Glu Met			
417	100	105	110	
420	Arg Tyr Gly Leu Leu Asn Asp Val Arg Val Leu Asp Lys Glu Ala Trp			
421	115	120	125	
424	Pro Leu Met Val Glu Arg Tyr Ile Ala Leu Ala Tyr Asp Lys Gly Ile			
425	130	135	140	
428	Met Arg Thr Ala Gln Asp Leu Pro Gln Pro Leu Leu Trp Pro Gln Leu			
429	145	150	155	160
432	Gln Val Ser Glu Gly Glu Lys Ser Tyr Thr Cys Asn Gln Phe Ser Leu			
433	165	170	175	
436	Ser Ser Glu Arg Pro Met Ile Gly Phe Cys Pro Gly Ala Glu Phe Gly			
437	180	185	190	
440	Pro Ala Lys Arg Trp Pro His Tyr His Tyr Ala Glu Leu Ala Lys Gln			
441	195	200	205	
444	Leu Ile Asp Glu Gly Tyr Gln Val Val Leu Phe Gly Ser Ala Lys Asp			
445	210	215	220	
448	His Glu Ala Gly Asn Glu Ile Leu Ala Ala Leu Asn Thr Glu Gln Gln			
449	225	230	235	240
452	Ala Trp Cys Arg Asn Leu Ala Gly Glu Thr Gln Leu Asp Gln Ala Val			
453	245	250	255	
456	Ile Leu Ile Ala Ala Cys Lys Ala Ile Val Thr Asn Asp Ser Gly Leu			
457	260	265	270	
460	Met His Val Ala Ala Leu Asn Arg Pro Leu Val Ala Leu Tyr Gly			

VERIFICATION SUMMARY  
PATENT APPLICATION: US/10/520,820

DATE: 08/22/2005  
TIME: 17:06:41

Input Set : A:\PTO.KD.txt  
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L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date